

brownish green with black spines. The eggs are laid on the young green stems at the top of the tree, and the pupæ are found under the food-tree, lying on the surface beneath leaves. The imago emerges in the beginning of March, this being evidently their season; since then a few have emerged at intervals, but most of them dwarfed. A very large percentage are stung by an ichneumon."

Notes on the larvæ of this species and *E. argiphontes*, and figures of the moths of both species, were published by me in Volume V, p. 166, and plates XI and XII of this JOURNAL.

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## PROCEEDINGS OF THE NEW YORK ENTOMOLOGICAL SOCIETY.

MEETING OF JUNE 4, 1901.

Held at the American Museum of Natural History. President Beutenmüller presiding. Seven members and one visitor present.

Mr. Beutenmüller exhibited a number of *Catocala* larvæ and called attention to some structural characters by means of which the larvæ may be divided into three groups, viz.: 1. With a process or elevation on the 8th segment. 2. Without a process or elevation on the 8th segment. To the first group belongs *C. cara*, *neogama*, *amatrix*, *grynea*, *ultronia*, *paleogama*, *innubens*, *parta*, etc., and to the second group, *C. consors*, *badia*, *piatrix*, *illecta*, *muliercula* and *antinympha*. He further stated that the second group could again be divided into two groups, with filaments or without filaments, along the sides of the body. To the latter group belong, *C. amica*, *judith* and *habilis*. He also states that the shapes and markings of the heads of the different species are very different, and afford good specific characters. In raising larvæ Mr. Beutenmüller said that by wrapping a wet sponge, cotton or rags around the stems of the food-plants the same could be kept fresh for a greater length of time and was preferable to the custom of putting the stems in wet sand or water, in the latter case the larvæ often get drowned, especially the night-feeding *Catocala* larvæ which leave their food-plants at dawn, to seek a hiding place at the base of the plant.

Mr. Schaeffer exhibited a small collection of beetles collected by Mr. Seifert in Florida.

Mr. Watson showed some fresh specimens of *Thecla damon*, and stated that the species was double brooded, the first brood appearing in April and the second in July. He said that the markings on the underside of the hind wings of the second brood were paler than those of the first brood. Mr. Watson also exhibited some larvæ of *Lycæna pseudargiolus* and *Melitæa phæton* and said that the latter feed very readily on *Plantago* as well as other plants. Mr. Beutenmüller remarked that he had raised this species on fern.

Mr. Barber spoke on a scheme for recording exact localities of captures of insects. After discussion the meeting adjourned until October 1st.

## MEETING OF OCTOBER 1, 1901.

Held at the American Museum of Natural History. Vice-President Kearfott in the chair. Eight members and two visitors present.

Mr. Frank W. Holms was elected an active member of the Society.

The matter relating to the advisability of holding one meeting a month was discussed, but no definite action was taken.

Mr. Joutel recorded the capture of the caterpillars of *Isochaetes beutenmülleri* on Staten Island, N. Y. (see ante, p. 190).

Mr. Schaeffer exhibited specimens of *Xylophilus melsheimeri*, *picus*, taken by him in the Highlands, N. J. He said that these species are generally rare in collections, which is due to the peculiar habits of the same. When beaten from branches into the umbrella they are difficult to detect amongst the rubbish. They remain motionless for a few seconds, and suddenly take flight. *X. subfasciatus* and *fasciatus*, which were also taken, are comparatively slow and can be readily seen and bottled. *X. melsheimeri* was taken only on hickory, *X. picus* on oak, *X. fasciatus* and *subfasciatus* on dogwood. The last two species are common and always found in company with the Staphylinid, *Palaminus testaceus*. He also showed a specimen of *Cafius sericeus* taken at Highlands, N. J., this being the first record of its occurrence in New Jersey. The very rare *Psammæcus desjardinsi*, known from the Madeira Islands and in North America from Oregon to California, was taken by him in his home, resting on a piece of white cloth. A collection of local Cioidæ was also exhibited by Mr. Schaeffer. After discussion, adjournment.

## MEETING OF OCTOBER 15, 1901.

Held at the American Museum of Natural History. President Beutenmüller in the chair. Eight members and four visitors present.

A letter from Mr. Joseph Kittel was read, inviting the members of the Society to visit his property, the "Herbert Domain," in Tennessee, which he thought would prove to be a good collecting ground. On motion, a vote of thanks was extended to Mr. Kittel.

The advisability of holding one meeting a month was again discussed, but all the members present were in favor of holding two meetings.

Mr. Beutenmüller spoke on some *Catocala* larvæ which he raised during the past summer. He stated that it was rather impossible to separate the larvæ of *C. muliercula* and *C. badia*, though the imagoes are very distinct. He further stated that the larvæ of *C. badia*, *muliercula*, *antinympa* and *consors* were day feeders, which is contrary to the habits of many of the other species of the genus, which feed at night. Colored drawings of a number of species, as well as a collection of *Catocalas*, from Dr. William Barnes, were exhibited.

Mr. Joutel spoke on a Geometrid caterpillar, which has the peculiar habit of covering itself with grains of sand or the like, and suggest that this habit may be a means of protection for the larva (see ante, p. 191).

Mr. Schaeffer recorded the capture of the larva of *Ceratonia catalpa* at Lakehurst, N. J. Mr. Beutenmüller called attention to the social habits of the larvæ of this species, and stated that it would undoubtedly before long extend its range northward. Dr. Van Dyke said that the larvæ of *Philampelius vitis* in California had similar habits to *catalpa*.

Mr. Schaeffer exhibited a specimen of *Matispa brunnea* taken in Lakehurst, N. J., and a specimen of *Trachykele blondeli* from Fresno Co., Cal.

Mr. Lyon spoke on the larva of *Selandria carye*, which is covered with long filaments of a waxy secretion.

#### MEETING OF NOVEMBER 19, 1901.

Held at the American Museum of Natural History.

Mr. William Beutenmüller, president, in the chair, and fifteen members and four visitors present.

The secretary being absent at the opening of the meeting, on motion of Mr. Joutel duly seconded Mr. Weeks was appointed secretary *pro tem*.

The minutes of the last meeting were read and approved. The secretary read the name of Mr. J. R. de la Torre Bueno of No. 437, Central Park West, proposed by Mr. Beutenmüller as an active member.

Mr. Joutel proposed Dr. James D. Needham, of Lake Forest University, Lake Forest, Illinois, as a corresponding secretary.

A letter from Dr. N. L. Britton, secretary of the council of the Scientific Alliance of New York, addressed to the secretary of the Society was read giving notice that in pursuance of article 7 of the constitution a total assessment of \$200 had been levied upon all the societies and that the amount apportioned to the Entomological Society was \$7, payable to Dr. E. G. Love, treasurer of the Council, and that payment might be made in installments, if preferable, of \$3.50, one before Jan. 1, 1902, and the other before April 1, 1902.

On motion of Mr. Weeks, duly seconded, the treasurer was authorized to pay the sum of \$7, the amount of the assessment due from the Society.

Mr. Beutenmüller reported that he had received a letter from Mrs. Slosson which was accompanied by specimens of lepidoptera for disposal at the annual auction sale to be held by the Society, and on motion of Mr. Weeks, the secretary was directed to express to Mrs. Slosson the thanks of the Society therefor.

Mr. Beutenmüller stated that at the next meeting he would have ready for inspection by the members the various publications received as exchanges and that it would be necessary to appoint a committee to take charge of the same and also of such as might be received hereafter.

Dr. Edwin J. Van Dyke, of San Francisco, California, then spoke upon the subject of the evening, "Observations upon the Faunal Regions of California from the standpoint of a Coleopterist." California is some 800 miles in length by 200 in width and is naturally divided longitudinally into three sections by the Coast Range and the Sierra Nevadas. The latter have an altitude of some 6,000 to 15,000 feet and form a boundary between the arid lands of the eastern portion and the greater bulk of the two western portions. These arid lands widen at the south by reason of the western trend of the Sierras and here include the valleys of Mono, Owen's and Death and portions of the Mojave and Colorado deserts. The Coast Range practically ends at Santa Barbara, although the islands directly south may have originally formed a continuation before submergence of the intervening territory. The altitude of this range varies from 1,000 to 10,000 feet, the latter height chiefly obtaining in the north. This range constitutes the dividing line between the narrow belt of coast

and this great valley region, which is enclosed at both the northern and southern ends by transverse ranges. Through breaks in the Coast Range, flow two large rivers into San Francisco Bay.

Chronologically, the Sierras are older than the Rocky Mountains, California existing when the Great Basin region was a vast inland sea. It was also much less subjected to glacial influences, thus permitting the survival of much of the ancient fauna. Contiguity to the ocean of a land of such great variation in topography naturally causes much diversity of climate. Four distinct climatic areas are recognized, viz.: the coast, interior valley, Sierra or higher mountain, and desert or semi-desert. The climate of the coast is tempered by the Japan current, and is cool and even; that of the valley (600 miles in length) is warm in summer, but without rain, and the reverse in winter; that of the Sierra mild and dry in summer with little rain, but severe in winter; and that of the desert intensely hot and dry in summer, and dry and mild or cold in winter, varying with the altitude. We find Dr. Merriam's theory that there are traces of two distinct insect faunas, one derived from the Boreal and the other from the Sonoran regions corroborated by the fact that among the coleoptera identical or affiliated forms and species indigenous to the Boreal region occur more frequently as we go northward with like result as regards the Sonoran as we go southward, representatives of both faunas overlapping. Contributions from the Alaskan Maritime region also prevail along the coast belt, certain species even occurring as far south as San Francisco, but in no case east of the Coast Range. In the northern elevated section between and including the Coast Range and the Sierras are found representatives of the so-called Canadian fauna and these often follow the ranges even to Lower California. It is probable that among the highest Sierras could be found examples or affiliated forms of the Hudsonian, timber line and Arctic faunas. The fauna of that portion of the Colorado desert within the State lying east of the San Bernardino Mountains and including the counties of San Diego, San Bernardino and the southern part of Inyo is distinctly Sonoran.

Immediately north lies the subregion of the Sonoran (so termed by Dr. Merriam) also known as the subregion of the Great Basin, including the larger part of Inyo, all of Mono, the larger portions of Modoc and Lassen and a small part of Plumas. Here *Acmaeodera*, *Asida* and *Eleodes* abound.

The California faunal region proper includes practically all the lowlands of the State, the fertile valleys of southern California and the extensive valleys of the San Joaquin and Sacramento, the lesser valleys along the coast and the foothills bordering them. The fauna prevailing throughout these portions are so affiliated with Sonoran forms, particularly toward the south as to warrant the designation of such portions as Sonoran sub-regions, and by the extension of these forms into the foothills where they have interbred with Boreal types through a series of ages genera characteristic of both parent regions have been evolved. *Omus*, *Brennus* (a cychrid subgenus), *Metrius*, *Promecognathus*, *Pleocomia* and *Rosalia* with others while more or less related to adjacent northern forms probably developed from a rich circumpolar fauna under the influence of adaptation to environment. *Omus* occurs rather generally throughout the state, and *Metrius* and *Promecognathus* similarly but less frequently in the moist timber belt of the Coast Range, although an Alpine variety of *Metrius* is found in the Sierras, and *Brennus* is confined to the coast. Many other examples

of restricted location could be given. In earlier periods California was more isolated particularly from the Sonoran region and northern influences prevailed. Then such genera as *Omus* and *Pleocoma* became first established. Subsequently a few southern forms such as *Conioutis* and its congeners gained access. These constituted the old California fauna, but when the southern isolation ceased, followed by the invasion of Sonoran forms, a new or later fauna was developed. This theory is partially supported by the fact that in the islands off the coast and in certain still isolated areas are faunas which are largely *sui generis*, and typical of the old California fauna above described. A better knowledge of the hitherto unexplored adjacent regions is required however before a satisfactory determination of the origin of species can be reached. Enough has been said however to demonstrate of how little value is the mere designation of material as Californian-North American would be nearly as definite.

On motion of Dr. Love, duly seconded a vote of thanks was extended to Dr. Van Dyke for his instructive and entertaining remarks. Dr. Van Dyke, in response to questions from the members, gave much valuable information relating to localities, the distribution and character of the native vegetation, and the occurrence and methods of capture of lepidoptera and coleoptera derived from his extensive experience in collecting in nearly every county of the State.

On motion the meeting then adjourned.

#### MEETING OF DECEMBER 3, 1901.

Held at the American Museum of Natural History, New York.

President Beutenmüller, in the chair. Eight members and two visitors present. The minutes of the last meeting read and approved.

Mr. J. N. de la Torre Bueno was elected an active member of the Society.

Dr. E. C. Van Dyke, Oakland, Calif., and Mr. H. C. Fall, Pasadena, Calif., were proposed for corresponding membership by Mr. Schaeffer.

The resignation of Miss Valpey was read and accepted.

After discussion it was decided that an auction sale of insects be held on the second meeting of the Society in January, 1902.

The publications received in exchange for the Journal were exhibited and the advisability of appointing a librarian was discussed, but no definite action was taken.

Mr. Seifert exhibited a beautiful series of *Olene leucophœa* which he raised from the eggs collected by him in Florida. Mr. Schaeffer showed a series of ten species of *Oxyporus* and stated that he had on some occasion expressed his doubts, as to the validity of *O. fasciatus*, taking it to be a color variety of *O. vittatus*, but finding a number of specimens amongst the extensive materials collected by Mr. Beutenmüller, in the Black Mts., N. C., which agree perfectly with the description of *O. vittatus*; he said that we may have to restore Gravenhorst's name *cinctus* to the form, with dark head, thorax and abdomen, of which *O. fasciatus* seems to be a variety. He also exhibited two species of *Derobrachus forveri*, one without locality and one from the Hy. Edwards collection from Lower California, as *D. geminatus*. It is very distinct from *geminatus*, by the much longer antennæ, with the joints comparatively more slender and longer, the very approximate eyes, the narrower neck, the spinose apex of the elytra and other characters.

Mr. Schaeffer also exhibited a new species of the Scymenid genus *Lophioderes*, collected by Mr. Beutenmüller in North Carolina and hitherto only known from the Pacific Coast.

Mr. Watson recorded the abundance of *Catopsilia eubule* in New York City, during the past season.

Mr. Beutenmüller announced the death of the well-known lepidopterist, Dr. Herman Strecker, of Reading, Pa.

After discussion, adjournment.

### HERMAN STRECKER, PH.D.

It is with the deepest feelings of sorrow that we have to announce the death of the great veteran lepidopterist, Herman Strecker, Ph.D., at his home in Reading, Pa., at 7:40 a. m., November 30, 1901. He was stricken with apoplexy shortly after leaving his place of business on November 29th and lingered unconscious until he passed into the great beyond.

Dr. Strecker was born in Philadelphia, Pa., March 24, 1836, and received his early education in the public schools of Reading, Pa., which was his home from the time he was eleven years old until his death. He was a sculptor by profession and to this he devoted most of his days but as a recreation he spent his nights and holidays in the collection of lepidoptera. His collection is the largest, most valuable and in every way the most remarkable private collection of lepidoptera on the American continent. Dr. Strecker described several hundred of new species the types of which are all in his collection as well as many types of species described by other authors. His book on "Lepidoptera, Rhopaloceres and Heteroceres, Indigenous and Exotic, 1872-1877," was published under difficulties. It was illustrated with fifteen colored plates. He saved enough to buy a lithographic stone and then drew and engraved upon it a group of butterflies or moths. This was sent to Philadelphia and the plates printed from it. In this way the stone travelled to and from Philadelphia until the plates were all finished and the book issued. Fifteen parts and four supplements have been published of this work. In consideration of his scientific knowledge Franklin and Marshall College, some years ago, conferred upon him the degree of Doctor of Philosophy. He leaves a widow, son and daughter.

WM. BEUTENMÜLLER.